

ZnO UV Detectors, Phase I

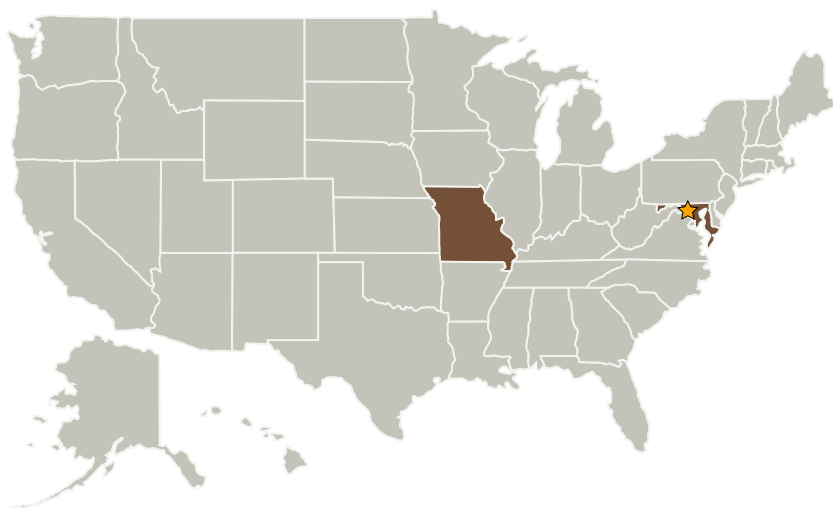
Completed Technology Project (2004 - 2004)



Project Introduction

Radiation-hard UV detectors will be developed with ZnO in Phase I efforts by MOXtronics, Inc. (MOX). ZnO is a very suitable material for fabrication of high-speed, high-detectivity, and radiation-hard UV detectors due to its unique structural, electrical and optical properties. MOX has achieved several breakthroughs for making p-type ZnO and ZnO p-n junction/Schottky diodes, which allows fabrication of ZnO UV detectors. High-efficiency ZnO UV detectors will be fabricated on ZnO substrates by using ZnO PIN structures. In Phase I, ZnO PIN diodes for UV detection will be fabricated and demonstrated. High-efficiency solar-blind ZnO UV detectors will be developed in future Phase II efforts.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★Goddard Space Flight Center(GSFC)	Lead Organization	NASA Center	Greenbelt, Maryland
MOXtronics, Inc.	Supporting Organization	Industry	Columbia, Missouri



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Goddard Space Flight Center (GSFC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Primary U.S. Work Locations

Maryland

Missouri

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Principal Investigator:

Yungryel Ryu

Technology Areas

Primary:

- TX14 Thermal Management Systems
 - └ TX14.2 Thermal Control Components and Systems
 - └ TX14.2.2 Heat Transport